



NQ Verification 2015–16 Key Messages Round 1

01

Section 1: Verification group information

Verification group name:	Physics
Verification event/visiting information	Event
Date published:	March 2016

National Courses/Units verified:

National 3, National 4, National 5, Higher and Advanced Higher Units

02

Section 2: Comments on assessment

Assessment approaches

It is important that centres use the most up-to-date version of the Unit assessment support pack (UASP) for the Unit being assessed. They should also make sure they have candidate evidence that matches the Assessment Standards and that they follow the advice in the judging evidence table for the Unit.

For Outcome 1 it is important that centres select an assessment activity that is at the appropriate level for the Course being followed by the candidate. The structure of the report should follow that required within the UASP and should have a clear link to a key area at the level being studied.

To aid both internal and external verification it would be advantageous if centre staff clearly annotated the candidate scripts to highlight where an Assessment Standard is achieved.

Most centres used the most up-to-date Unit assessment support pack assessment instrument but a few used the previous version.

For Assessment Standard 2.1, when a centre is following the portfolio approach to assessment centres should note that the minimum that can be assessed in one go is a key area and the assessment of a key area should not be split.

Centres selected for verification in round 1 that were following the portfolio approach all followed this rule.

For all questions that involve a value to be given it is important that the accepted answer includes the unit where the quantity being stated has a unit associated with it. The only place this is not expected is where the value is written into a table where the heading has the unit.

All candidates should be given the opportunity to be assessed over all key areas within a Unit before a final decision on that Unit is made. If a candidate needs to be re-assessed for Assessment Standard 2.1 then there are two possible approaches to re-assessment. The candidate could be given another test covering all the key areas within a Unit and if they get 50% or more of the responses correct they would pass AS 2.1. Alternatively, the centre could analyse the candidate's performance in each key area in which they performed poorly in the first test, then re-assess the candidate on those key areas. If the candidate gains 50% or more of the responses correctly for the new test then they pass AS 2.1.

The Unit-by-Unit approach was followed by the majority of the centres selected for round 1 to assess Assessment Standards 2.1 and 2.2 at National 5, Higher and Advanced Higher (2.1 and 2.4 at National 3 and 4).

Assessment judgements

Through the use of practical experimentation candidates are required to complete Outcome 1. This allows the candidate to demonstrate experimental/practical skills that cover all the Assessment Standards for this Outcome. This is usually achieved through a single assessment activity. If required, each Assessment Standard can be achieved individually to allow the candidate to achieve success in all six Assessment Standards.

It is important that the Assessment Standards for Outcome 1 are not split into smaller parts, especially Assessment Standard 1.1 which consists of six pieces of evidence (five at National 3) required from one plan for a single experimental procedure. If one piece is incorrect or missing the centre can allow the candidate to redraft the whole plan for AS 1.1 or design an alternative plan for another experiment.

It should be noted that all centres selected in this verification round that included an Outcome 1 report, carried out practical experiments that allowed all Assessment Standards to be assessed with the one activity.

A clear aim is required at the start of any experimental/practical investigation to allow the candidate to draw effective conclusions based on the stated aim.

When the candidate is planning an investigation the description should be clear enough to allow another person to carry out the experimental/practical procedure in the exact same way as the candidate. It is not necessary for the dependent

and independent variables to be explicitly stated as long as they are clear in the procedure.

For Assessment Standard 1.4 at National 4, National 5, Higher or Advanced Higher, or Assessment Standard 1.3 at National 3, candidates should be encouraged to draw a valid graph where the results/aim clearly demonstrate that this would be appropriate. This will give the candidates a second opportunity to demonstrate achievement of the Assessment Standard. It should be clear that to achieve the Assessment Standard the headings and units should be included and correct in order to achieve this AS. It is also important that, if appropriate, an origin is marked clearly on the graph as per the General Marking Instructions.

To aid feedback to the candidate and support both internal and external verification it is important that the assessors indicate clearly on the candidate script where each of the Assessment Standards is achieved.

For Assessment Standard 2.1 it is important that the candidate is awarded a pass when they achieve half the total of correct responses expected as per the marking guidance. It is also important that centres annotate any marking guidance used to show alternative answers accepted where appropriate. Where centres are using their own assessment or have adapted the UASP, it is important that an assessment grid is produced to show which key areas are being covered by each question to demonstrate the number of opportunities per key area the candidates are given. Where centres are devising their own assessments or making major adaptations to the UASPs these should be submitted for prior verification.

In the centres verified this year it was clear that all centres used the correct process of half the total number of opportunities to assess Assessment Standard 2.1 across all the key areas and not that of half the opportunities for each key area.

When the portfolio approach is used the achievement of 50% of the statements being made for Assessment Standard 2.1 still applies and should be checked at the end of the Unit when summing up of the successful responses is made and checked against the total number of opportunities given to make accurate statements.

For Assessment Standard 2.2 at National 5, Higher and Advanced Higher or Assessment Standard 2.4 at National 3 and National 4, it is important that each of the problem solving types associated with the level of study is achieved across the Course. The similar 50% achievement for each problem solving type is applied when the candidate is given an assessment.

In a number of centres the use of inaccurate rounding was given credit but it is important that the General Marking Principles that are applied to the final examination are also applied to the Unit assessments. Care should also be taken to accept the appropriate number of significant figures when dealing with any calculation, where the usual rule of between one fewer and up to two more in the final answer than the data with the fewest significant figures should be applied.

The use of a recording grid for this Assessment Standard would make it clear when a candidate has achieved that skill.

For Assessment Standard 2.2 and 2.3 at National 3 and National 4, it is important that the candidates include sufficient physics knowledge at the appropriate level of study.

It is vital that overall decisions made by the centre in respect of each Assessment Standard is clearly recorded and indicated on the candidate script. A good number of centres made it clear where candidates had achieved each Assessment Standard and where verification took place. However, for a few centres the final decision between assessor and internal verifier was not always clear.

03

Section 3: General comments

It is clearly stated that at National 3, National 4, National 5 and Higher levels that the candidates can be involved in the same experiment/practical activity and so gain the same set of results. It is important that after this group activity each candidate individually writes up the Outcome 1 to allow them to individually evidence each of the Assessment Standards.

It should also be noted that candidates should be encouraged to redraft the final report where they have not passed particular Assessment Standards. The assessor should supply appropriate feedback to allow the candidate to focus on what is required, without giving model answers as prompts.

Some centres had amended the marking guidance to show alternative acceptable answers but these new instructions were not always applied consistently to the candidate sample supplied. It is important that accurate amended marking guidance is made and applied consistently across the whole cohort. Care should be taken not to add additional responses that are either incorrect, do not answer the question or are inappropriate to the level being tested. Where centres are in doubt as to what to accept, consulting the examination Marking Instructions, especially the new National Qualifications exam papers and Revised Higher or Advanced Higher past papers, will give additional guidance for similar questions.

Over the whole sample this year it was noted that the centre marking was more in line with national standards than in previous years.

When a centre is selected for external verification it should only submit one Unit for each level being verified, ie if National 4 and National 5 are being sent then one Unit for each candidate at National 4 and one for the candidates at National 5 should be submitted for verification. It is also important that the centres make it clear which Assessment Standard(s) are to be verified if they send in more evidence than required.